UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,322	01/16/2004	Joseph J. Kubler	14364US10	2925

23446 7590 01/04/2011

MCANDREWS HELD & MALLOY, LTD
500 WEST MADISON STREET
SUITE 3400
CHICAGO, IL 60661

EXAMINER
WANG, DAVID

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
01/04/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/760,322	KUBLER ET AL.	
	Examiner	Art Unit	
	David Wang	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 August 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-88* is/are pending in the application.

4a) Of the above claim(s) *40, 69, 80, 82, 84* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-39, 41-68, 70-79, 81, 83, 85-88* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 August 2010* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

FINAL REJECTION

Drawings

1. The drawings were received on 6 August 2010. These drawings appear to be acceptable.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "outgoing digital voice data is transmitted redundantly over the wireless packet network" (claims 22, 45, 54) and "at least one processor controls a level of one or both of the first voice stream and the second voice stream depending upon an amount of delay between transmission of the packets received via the wireless packet network and conversion of the incoming digital voice data to the second voice stream" (claims 86, 87, 88) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Response to Amendment

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 86-88 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It could not be found in the original specification "wherein the at least one processor controls a level of one or both of the first voice stream and the second voice stream depending upon an amount of delay between transmission of the packets received via the wireless packet network and conversion of the incoming digital voice data to the second voice stream."

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 22, 45, 54, 81, 83, 85, 86-88 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US 5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994).

8. Re claim 22, claim 45, and claim 54,

At least one processor (audio processor 56, Hoppal et al. Fig. 5) for processing outgoing digital voice data converted from a first voice stream to produce packets (vocoded voice packets, Hoppal et al. abstract) for transmission via the wireless packet network (Hoppal et al. Fig. 1);

The at least one processor operably coupled to a radio transmitter for transmitting the packets via the wireless packet network (transceiver 44, Hoppal et al. Fig. 4);

The at least one processor operably coupled to a radio receiver for receiving packets via the wireless packet network (transceiver 44, Hoppal et al. Fig. 4);

The at least one processor for selectively processing the packets received via the wireless packet network to produce incoming digital voice data for conversion to a second voice stream (via speech synthesizer 62, Hoppal et al. c6 37-50);

Wherein the phone supports concurrent, bidirectional voice communication (bi-directional audio without significant delay, Hoppal et al. c6 37-50).

Hoppal may not adequately teach monitoring a voice stream for a lack of speech for a minimum period of time. However, Kudo better teaches this limitation:

Wherein the at least one processor monitors the first voice stream for a lack of speech (voice/silence detector, Kudo et al. c4 21-36) for a minimum period of time (predetermined time of silence, Kudo et al. c4 21-36).

Kudo and Hoppal are analogous art, because both references similarly teach voice packets. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to detect voice/silence by Kudo with Hoppal's method for conveying audio signals using digital packets in order to provide a voice data transmission system (Kudo et al. c3 66-2).

The prior art teaches transmitting digital voice packet data over a wireless packet network. The prior art does not specifically teach "wherein the outgoing digital voice data is transmitted redundantly over the wireless packet network." However, Haoui teaches that the outgoing digital voice data (digitally encoded speech signals, Haoui et al. abstract) is transmitted redundantly (CRC and FEC, Haoui et al. c7 65-14) within two or more successive transmissions (data is interleaved over two time slots, Haoui et al. c8 7-10) over the wireless packet network (Haoui et al. Fig. 2). Haoui further teaches redundant transmission, because excess bits are added to the data stream (75 bits of class 1 bits becomes 165 bits of coded class 1 bits, Haoui et al. Fig. 5A and c7 65-14).

Haoui is analogous to the prior art, because Haoui also teaches digitally encoded speech. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to redundantly transmit voice data (by Haoui) in a wireless packet network (by prior art) in order to "protect the encoded speech signals during transmission" (Haoui et al. abstract).

Newton's Telecom Dictionary is further provided to support that CRC and FEC techniques teach redundant transmission. In a CRC scheme, the CRC character (checksum) is the redundant piece of information that is appended to the data block (CRC and CRC character, Newton's Telecom Dictionary). In an FEC scheme, "redundant bits generated at the transmitted end are used at the receiving terminal to detect, locate and correct any transmission errors" (Forward Error Correction, Newton's Telecom Dictionary).

9. Re claim 81 (of claim 22), claim 83 (of claim 45), and claim 85 (of claim 54), Haoui further teaches that outgoing digital voice data (digitally encoded speech signals, Haoui et al. abstract) is transmitted redundantly (CRC and FEC, Haoui et al. c7 65-14) within two or more successive transmissions (data is interleaved over two time slots, Haoui et al. c8 7-10) over the wireless packet network (Haoui et al. Fig. 2).

10. Re claim 86 (of claim 22), claim 87 (of claim 45), and claim 88 (of claim 54), Kudo further teaches that at least one processor controls a level of one or both of the first voice stream and the second voice stream (fluctuation absorption delay time, Kudo et al. Fig. 10 and c6 8-35) depending upon an amount of delay between transmission of the packets received via the wireless packet network and conversion of the incoming digital voice data to the second voice stream (deducing the fluctuation absorption delay time from the estimated packet transmission delay time, Kudo et al. c6 24-27).

11. Claims 23-24, 26, 30, 49, 55-56, 59 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US 5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994) as applied to claims 22, 45, 54 above, and further in view of Bertland (US 5,596,573).

12. Re claim 23 (from claim 22), claim 49 (from claim 45), and claim 55 (from claim 54), the prior art may not specifically teach an interface. However, Bertland teaches this limitation such that:

At least one interface for accepting input from a user (address input 3, Bertland Fig. 1).

Bertland is analogous to the prior art, because Bertland similarly teaches digitized voice in a data packet. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teachings of the prior art with Bertland's user interface in order to convert a voice message from analog form to digital form (Bertland c1 55-67).

Bertland further teaches:

The at least one interface for providing feedback to a user (speaker 10, Bertland Fig. 1).

13. Re claim 24 (from claim 23), Bertland further teaches that the interface comprises a keypad (key set, Bertland c3 30-36).

14. Re claim 26 (from claim 22) and claim 56 (from claim 54), Bertland further teaches:

a handset having a microphone for transducing sound into the first voice stream, and (microphone 2, Bertland Fig. 1)

a transducer for converting the second voice stream into sound (speaker 10, Bertland Fig. 1)

15. Re claim 30 (from claim 22) and claim 59 (from claim 54), Bertland further teaches that the phone transmits and receives packets comprising digital data not related to the establishment or receipt of a voice call (packet-switched digitized voice message, Bertland c1 55-12).

16. Claims 41, 70 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US 5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994) as applied to claims 22, 45, 54 above, and further in view of Karban et al. (US 4,376,874).

17. Re claim 41 (from claim 22) and claim 70 (from claim 54), the prior art may not distinctly teach that "the minimum period of time is approximately 200 milliseconds." However, Karban teaches detecting silence for a period of time greater and less than 700 milliseconds (Karban et al. Fig. 4a and Fig. 4b). A period of time that is greater and less than 700 milliseconds is approximate to 200 milliseconds.

Karban is analogous to the prior art, because Karban similarly teaches digitized voice. Thus, it would have been obvious to a person having ordinary skill in the art to detect silence for a period of time around 200 milliseconds (by Karban) in a digital voice system (by prior art) for real-time silence detection (Karban et al. title).

18. Claims 42-44, 71-73 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US

5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994) as applied to claims 22, 45, 54 above, and further in view of Hayata (US 5,553,192).

19. Re claim 42 (from claim 22), the prior art may not adequately teach that the data transmission is interrupted during a lack of speech. However, Hayata teaches that the transmission of packets containing digital voice data is interrupted (transmitter switched off, Hayata Fig. 1) when a lack of speech for the minimum period of time is detected (silence, Hayata Fig. 1).

Hayata is analogous to the prior art, because Hayata similarly teaches digitized voice. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to interrupt transmission during a lack of speech (by Hayata) in a communications network (by prior art) wherein discontinuous transmission (DTX) is utilized (Hayata abstract).

20. Re claim 43 (from claim 42) and claim 72 (from claim 54), Hayata further teaches that an indication of a change in speech activity is transmitted following the detection of a lack of speech for the minimum period of time (transmitting BG noise code sequence during silence, Hayata Fig. 1).

21. Re claim 44 (from claim 43) and claim 73 (from claim 72), Hayata further teaches that the indication is a group identifier (the code is grouped per frame, Hayata Fig. 1).

22. Re claim 71 (from claim 54), the prior art may not adequately teach that the data transmission is interrupted during a lack of speech. However, Hayata teaches:

Interrupting transmission of packets containing digital voice data transmitter switched off, Hayata Fig. 1) when a lack of speech for the minimum period of time is detected (silence, Hayata Fig. 1); and

Refraining from interrupting transmission of packets containing digital voice data when a lack of speech for the minimum period of time is not detected (transmitter is not switched off during periods of speech, Hayata Fig. 1).

Hayata is analogous to the prior art, because Hayata similarly teaches digitized voice. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to interrupt transmission during a lack of speech (by Hayata) in a communications network (by prior art) wherein discontinuous transmission (DTX) is utilized (Hayata abstract).

23. Claims 25, 31-32, 36, 47-48, 50, 60-61, 65 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US 5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994) and Bertland (US 5,596,573) as applied to claims 23, 49, 55 above, and further in view of Dinkins (US 5,678,172).

24. Re claim 25 (from claim 23), Bertland teaches pager systems (Mobitex, Bertland c1 25-36), which include a display, but the prior art may not particularly state a display

interface. However, Dinkins teaches that interface comprises a display (display 302, Dinkins Fig. 18A).

Dinkins is analogous to the prior art, because Dinkins similarly teaches voice packets. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teachings of the prior art to include a display interface in a mobile device by Dinkins to increase the "interactivity" of a voice packet messaging system (Dinkins c4 37-44).

25. Re claim 31 (from claim 22), claim 47 (from claim 45), and claim 60 (from claim 54), Dinkins further teaches that the the wireless packet network communicates using an Internet protocol (IP) (Dinkins c9 4-16).

26. Re claim 32 (from claim 31), claim 48 (from claim 47), and claim 61 (from claim 54), Dinkins further teaches that the Internet protocol is the transmission control protocol (TCP/Internet protocol (IP) (Dinkins c9 17-36).

27. Re claim 36 (from claim 22), claim 50 (from claim 45), and claim 65 (from claim 54), Dinkins further teaches an interface (digital display means, Dinkins c13 19-39) for receiving information representing an image for transmission via the wireless packet network (Interactive data appliance IDA can transmit and receive video, Dinkins c2 56-58).

28. Claims 27-28, 57-58 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US 5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994) as applied to claims 22, 45, 54 above, and further in view of Bergman (US 4,866,704).

29. Re claim 27 (from claim 22) and claim 57 (from claim 54), the prior art may not specifically state a buffer. Nevertheless, Bergman teaches that a processor buffers incoming digital voice data (buffers 26 and 22, Bergman Fig. 4-6) for an adjustable amount of time (adjusting buffer based on time and bits required, Bergman c6 33-41 and Fig. 15) to avoid the occurrence of a gap in the second voice stream (reconstruct the original continuous communication without gaps, Bergman c6 29-32).

Bergman is analogous to the prior art, because Bergman similarly teaches packetized voice data. Ergo, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate Bergman's voice data buffer in a communications network (of prior art) in order to facilitate synchronized transmission (to prevent gaps in communications, Bergman c6 29-32).

30. Re claim 28 (from claim 27) and claim 58 (from claim 54), Bergman further teaches that buffering data for an adjustable amount of time is based upon a propagation delay (transmission latency is typical for a network, Bergman c5 33-47, therefore an elastic buffer is implemented to minimize latency, Bergman c6 20-32).

31. Claim 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US 5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994) and Bergman (US 4,866,704) as applied to claim 27 above, and further in view of Drynan et al. (US 4,617,657).

32. Re claim 29 (from claim 27), the prior art teaches adjusting an elastic buffer for a required amount of time, such as to compensate for a propagation delay. However, the prior art may not specifically teach that the amount of time is based upon a test packet. However, Drynan teaches that the adjustable amount of time is based upon a test packet (measuring a timing delay from a predetermined packet, which is similar to a ping test, Drynan c3 25-32).

Drynan is analogous to the prior art, because Drynan similarly teaches a packet network. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to buffer data for an adjustable amount of time (by prior art) based upon a propagation delay or transmission latency (by prior art), in which the propagation delay is based on a test packet (by Drynan). The combination allows the system to compensate for propagation delay using a test packet.

33. Claims 34-35, 63-64 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US 5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994) as applied to claims 22, 45, 54 above, and further in view of Averbuch (US 5,268,933).

34. Re claim 34 (from claim 22) and claim 63 (from claim 54), the prior art may not specifically teach the spread spectrum technique. However, Averbuch teaches that the wireless packet network communicates using a direct sequence spread spectrum technique (direct sequence, Averbuch c1 40-44).

Averbuch is analogous to the prior art, because Averbuch similarly teaches digitized voice packets. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to communicate using a direct sequence spread spectrum (by Averbuch) in a communications network (by prior art) in order to modulate the signal data (Averbuch c1 11-37).

35. Re claim 35 (from claim 22) and claim 64 (from claim 54), Averbuch further teaches that the wireless packet network communicates using a frequency hopping spread spectrum technique (hopping, Averbuch c1 45-53).

36. Claims 33, 46, 62 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US 5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994) as applied to claims 22, 45, 54 above, and further in view of Smith et al. (US 5,796,772).

37. Re claim 33 (from claim 22), claim 46 (from claim 45), and claim 62 (from claim 54), the prior art teaches a wireless packet network, but the prior art does not particularly teach that the network communicates on a frequency of 2.4 GHz. Smith, on

the other hand, teaches that the wireless packet network communicates at a frequency of approximately 2.4 gigahertz (Smith et al. abstract).

Smith is analogous to the prior art, because Smith similarly teaches digital voice systems. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to communicate on a frequency of with Smith's 2.4 GHz communication in a wireless network (by prior art) in order to carry digital voice (Smith et al. c1 61-4).

38. Claims 37-39, 51-53, 66-68 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US 5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994) as applied to claims 23, 49, 55 above, and further in view of Stein (US 5,628,055).

39. Re claim 37 (from claim 22), claim 51 (from claim 45), and claim 66 (from claim 54), the prior art does not specifically teach a removable circuit card. Despite this omission, Stein teaches a circuit card interface for accepting a removable circuit card (Stein Fig. 12).

Stein is analogous to the prior art, because Stein similarly teaches a digital voice cellular system. Therefore, it would have been obvious for a person having ordinary skill in the art at the time the invention was made for a wireless network system (of prior art) to incorporate a removable circuit card (by Stein) in order to transmit and receive on a digital cellular radio network (Stein c1 46-9).

40. Re claim 38 (from claim 37), claim 52 (from claim 51), and claim 67 (from claim 66), Stein further teaches that the removable circuit card comprises a wired network interface card (modem for standard telecommunication network lines, Stein c2 10-17).

41. Re claim 39 (from claim 37), claim 53 (from claim 51), and claim 68 (from claim 66), Stein further teaches that the removable circuit card interface is compatible with the Personal Computer Memory Card Interface Association (PCMCIA) standard (Stein c1 25-45).

42. Claims 74-79 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppal et al. (US 5,737,331) in view of Kudo et al. (US 5,148,429) and Haoui et al. (US 5,742,640) and Newton's Telecom Dictionary (8th Edition, 1994) as applied to claims 22, 45, 54 above, and further in view of Li et al. (US 5,617,423).

43. Re claim 77 (from claim 22), claim 78 (from claim 45), claim 79 (from claim 54), the prior art may not specifically state how the phone adjusts the amount of packetized digital voice data. However, Li teaches this limitation:

wherein the phone adjusts the amount of digital voice data packetized and transmitted over the wireless network (discarding silent frame packets, Li et al. c25 65-4), in accordance with a predetermined voice threshold (power PWR is lower than a preselected threshold, Li et al. c25 65-4).

Li is analogous to the prior art, because Li similarly teaches digitized voice. Thus, it would have been obvious to a person having ordinary skill in the art at the time

the invention was made to adjust the amount of digital voice data in accordance with a predetermined voice threshold (by Li) in a wireless network (by prior art) in order to allocate the amount of voice digital information required to be transferred (Li et al. c5 33-39).

Li actually teaches that "the phone adjusts the amount of digital voice data packetized and transmitted over the wireless network" in many recitations.

Li further teaches that voice data packets containing silence are discarded (Li et al. c32 11-21). Hence, the packet data is being adjusted according to a voice threshold (voice or silence).

Li also teaches that speech compression adjusts the amount of data transmitted over the network, in which the predetermined voice threshold is quantized to a value between 1 bit and 8 bits (Li et al. c21 17-34).

Li also teaches that the amount of digital voice data is adjusted to "minimize compute power and bandwidth" (Li et al. c21 62-6) by reducing "the dynamic range o the input speech signal by removing short term and long term redundancies." Quantization of speech implies a predetermined voice threshold according to the bit resolution (similar to PCM, Li et al. c23 51-4).

Li also teaches a variable bit rate to adjust the amount of transmitted voice data (Li et al. c23 40-41). Li's teaching is in addition to the prior art that already teaches silence detection, which teaches a predetermined voice threshold.

44. Re claim 74 (from claim 22), claim 75 (from claim 45, claim 76 (from claim 54), Li further teaches that the phone does not receive dedicated bandwidth on the wireless packet network for communication of packets containing digital voice data (by dynamically allocating bandwidth depending on the demands of the voice grade digitized signal, Li et al. c2 51-56).

Response to Arguments

45. Applicant's arguments filed 6 August 2010 have been fully considered but they are not persuasive.

46. Re claim 22, claim 45, and claim 54, the applicant argues that the prior art does not teach "wherein the outgoing digital voice data is transmitted redundantly over the wireless packet network." Furthermore, the applicant argues that neither a CRC nor FEC scheme implements redundant transmission of data. Haoui teaches that digitally encoded speech is transmitted redundantly via CRC and FEC schemes (Haoui et al. abstract and Haoui et al. c7 65-14). Newton's Telecom Dictionary further teaches that FEC generates "redundant bits" (Forward Error Correction, Newton's Telecom Dictionary). Newton's Telecom Dictionary further teaches that a CRC scheme appends a value to the data block (CRC and CRC character, Newton's Telecom Dictionary). This appended value (parity check) is redundant, because it is excess to what is required (the plain dictionary definition of "redundant," dictionary.com). In addition, the plain meaning of "redundant' does not specify that "derived" information cannot be redundant. CRC and FEC schemes both contain excess information for "checking

purposes" (dictionary.com), and therefore CRC and FEC schemes are redundant transmission schemes.

The applicant further argues that ' "interleaving" does not inherently result in "data" being "transmitted redundantly." ' The examiner did not make an assertion of inherency. Data is being transmitted redundantly in a CRC and FEC scheme, because excess information is being added to the data stream. Haoui further teaches that excess bits are being added (75 bits of class 1 bits becomes 165 bits of coded class 1 bits, Haoui et al. Fig. 5A and c7 65-14).

47. Re claim 45 and claim 54, please see arguments associated with similar claim 22 above.

48. Re claims 23, 24, 26, 30, 41, 49, 55, 56, 59, and 70, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. These dependent claims are still rejected, because the independent claims are still rejected.

49. Re claim 41 and claim 70,

In response to applicant's argument that the prior art does not teach "wherein the minimum period of time is approximately 200 milliseconds", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed

invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

However, upon further consideration, a new ground(s) of rejection is made in view of Karban et al. (US 4,376,874). Karban similarly teaches silence detection. Because Karban teaches detecting silence, Karban also teaches detecting silence for any period of time. The structure to detect silence for 50 milliseconds is also the same structure to detect silence for 500 milliseconds, or even 200 milliseconds. Nevertheless Karban further teaches detecting silence that is greater and less than 700 milliseconds (Karban et al. Fig. 4a and Fig. 4b). 700 milliseconds is approximate to 200 milliseconds.

50. Re claims 42-44 and claims 71-73, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. These dependent claims are still rejected, because the independent claims are still rejected.

51. Re claim 25, 31, 32, 36, 47, 48, 50, 60, 61, and 65, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language

of the claims patentably distinguishes them from the references. These dependent claims are rejected, because the independent claims are still rejected.

52. Re claim 27-28 and 57-58, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. These dependent claims are rejected, because the independent claims are still rejected.

53. Re claims 27-28, the applicant argues that the prior art doesn't teach “at least one processor buffers incoming digital voice data for an adjustable amount of time to avoid the occurrence of a gap in the second voice stream.” Bergman teaches elastic buffers (Bergman Fig. 4-6 and c5 60-68). The elastic buffers are adjustable, hence the term “elastic buffer.” The elastic buffers are adjustable with respect to time, because Bergman teaches the relationship between buffer size and time (Bergman Fig. 15). The elastic buffers are also used to “avoid the occurrence of a gap,” because "packets 24 can then be removed from the buffer 26 in a continuous stream without gaps therebetween so as to “reconstruct” the original continuous communication" (Bergman c6 30-32).

The applicant further argues that the prior art doesn’t teach that “the adjustable amount of time is based upon a propagation delay.” Bergman teaches that elastic buffers are adjustable. The reasons to adjust a buffer may be many. But Bergman

teaches that one reason to adjust a buffer is to minimize latency (Bergman c6 20-21). Transmission latency is a measure of time (typically in milliseconds). Transmission latency is also propagation delay (different delay for satellite transmission, Bergman c5 33-47; different delay for fiber optics, Bergman c8 32-35).

54. Re claim 29, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. This dependent claim is rejected, because the independent claim is still rejected.

55. Re claims 34-35 and 63-64, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. These dependent claims are rejected, because the independent claims are still rejected.

56. Re claims 33, 46, and 62, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. These dependent claims are rejected, because the independent claims are still rejected.

57. Re claims 37-39, 51-53, and 66-68, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. These dependent claims are rejected, because the independent claims are still rejected.

58. Re claims 74-79, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. These dependent claims are rejected, because the independent claims are still rejected.

59. Re claim 77-79, the applicant argues that the prior art does not teach that “the phone adjusts the amount of digital voice data packetized and transmitted over the wireless network, in accordance with a predetermined voice threshold." Li actually teaches that "the phone adjusts the amount of digital voice data packetized and transmitted over the wireless network” in many recitations.

Li teaches that voice data packets containing silence are discarded (Li et al. c32 11-21). Hence, the packet data is being adjusted according to a voice threshold (voice or silence).

Li also teaches that speech compression adjusts the amount of data transmitted over the network, in which the predetermined voice threshold is quantized to a value between 1 bit and 8 bits (Li et al. c21 17-34).

Li also teaches that the amount of digital voice data is adjusted to "minimize compute power and bandwidth" (Li et al. c21 62-6) by reducing "the dynamic range o the input speech signal by removing short term and long term redundancies." Quantization of speech implies a predetermined voice threshold according to the bit resolution (similar to PCM, Li et al. c23 51-4).

Li also teaches a variable bit rate to adjust the amount of transmitted voice data (Li et al. c23 40-41). Li's teaching is in addition to the prior art that already teaches silence detection in speech, which implies a predetermined voice threshold.

60. Re claims 81, 83, and 85, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. These dependent claims are rejected, because the independent claims are still rejected.

Conclusion

61. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Wang whose telephone number is (571)270-1214. The examiner can normally be reached on M - F 10 AM - 4 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571.272.7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David Wang/
Examiner, Art Unit 2617
22 December 2010
/Patrick N. Edouard/
Supervisory Patent Examiner, Art Unit 2617